

the control arrangement being configured and arranged to simulate effects relative to inertia and the control arrangement is configured and arranged to, in response to a train start command, gradually supply power to the motor.

34. (New). a control and motor arrangement for a model toy train comprising:
a motor, configured and arranged to generate a locomotive force for propelling the model train;

a power arrangement, coupled to a model railroad track used by the model train and configured and arranged to supply power to the control and motor arrangement;

a radio control interface, configured to receive commands from a radio controller / unit;

a process control arrangement, coupled to receive speed information regarding the rotational velocity of the motor and configured and arranged to generate a plurality of motor control signals based upon a combination of a plurality of speed feedback control signals and pulse width modulation signal;

a motor control arrangement, responsive to the motor control signals and coupled to receive power from the power arrangement and configured and arranged to supply power to the motor at different times based on the motor control signals;

a sound information arrangement, operatively coupled to receive rotational speed and positional information from the motor and to provide the rotational speed and positional information to a sound control arrangement for simulating railroad sounds; and

a short circuit protection arrangement operatively coupled to the motor and configured and arranged to remove power from the motor in response to a current flow exceeding a defined threshold.

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a motor, configured and arranged to generate a locomotive force for propelling the model train;

a power arrangement, coupled to a model railroad track used by the model train and configured and arranged to supply power to the control and motor arrangement;